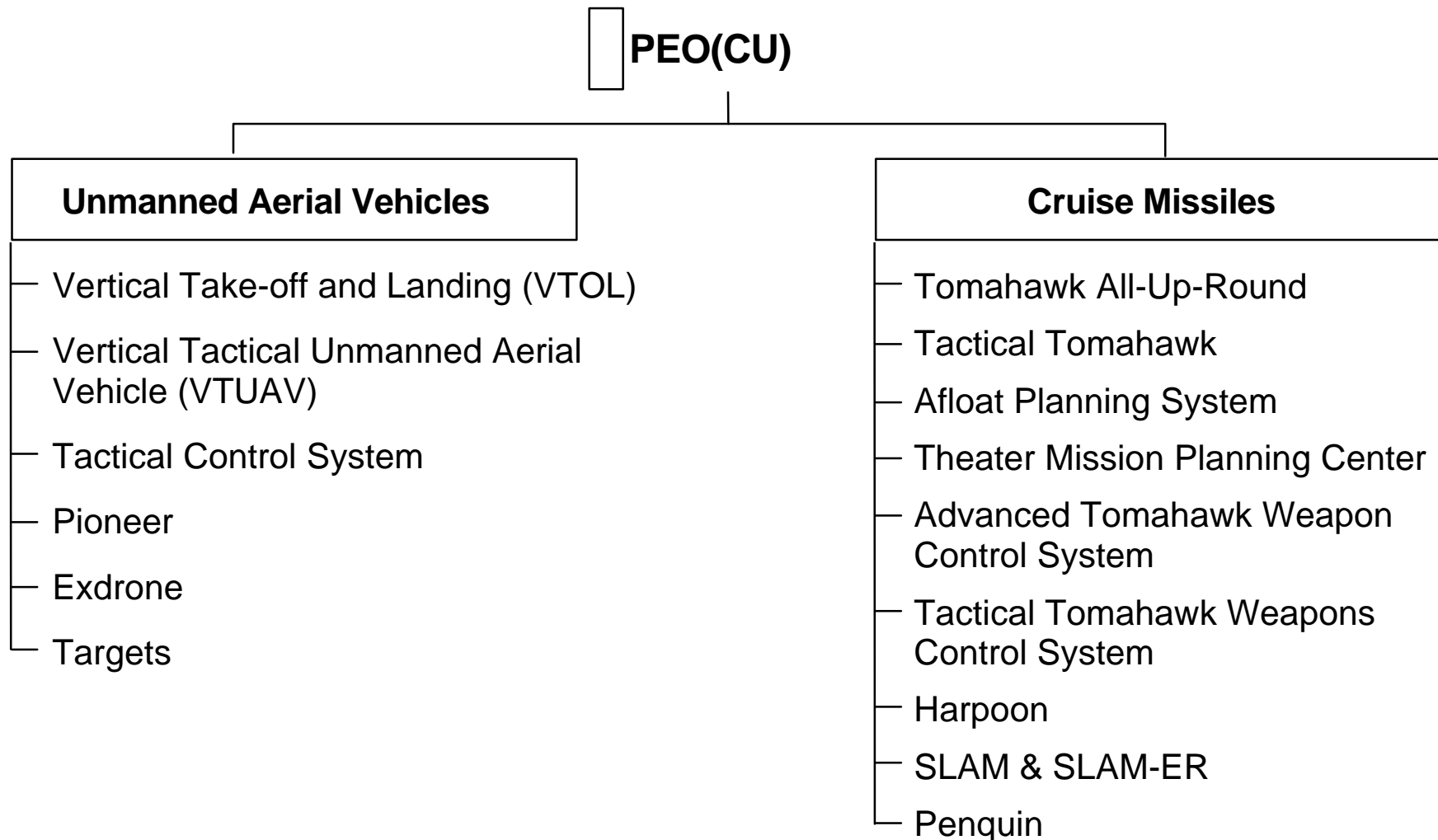


Navy Precision Strike Acquisitions

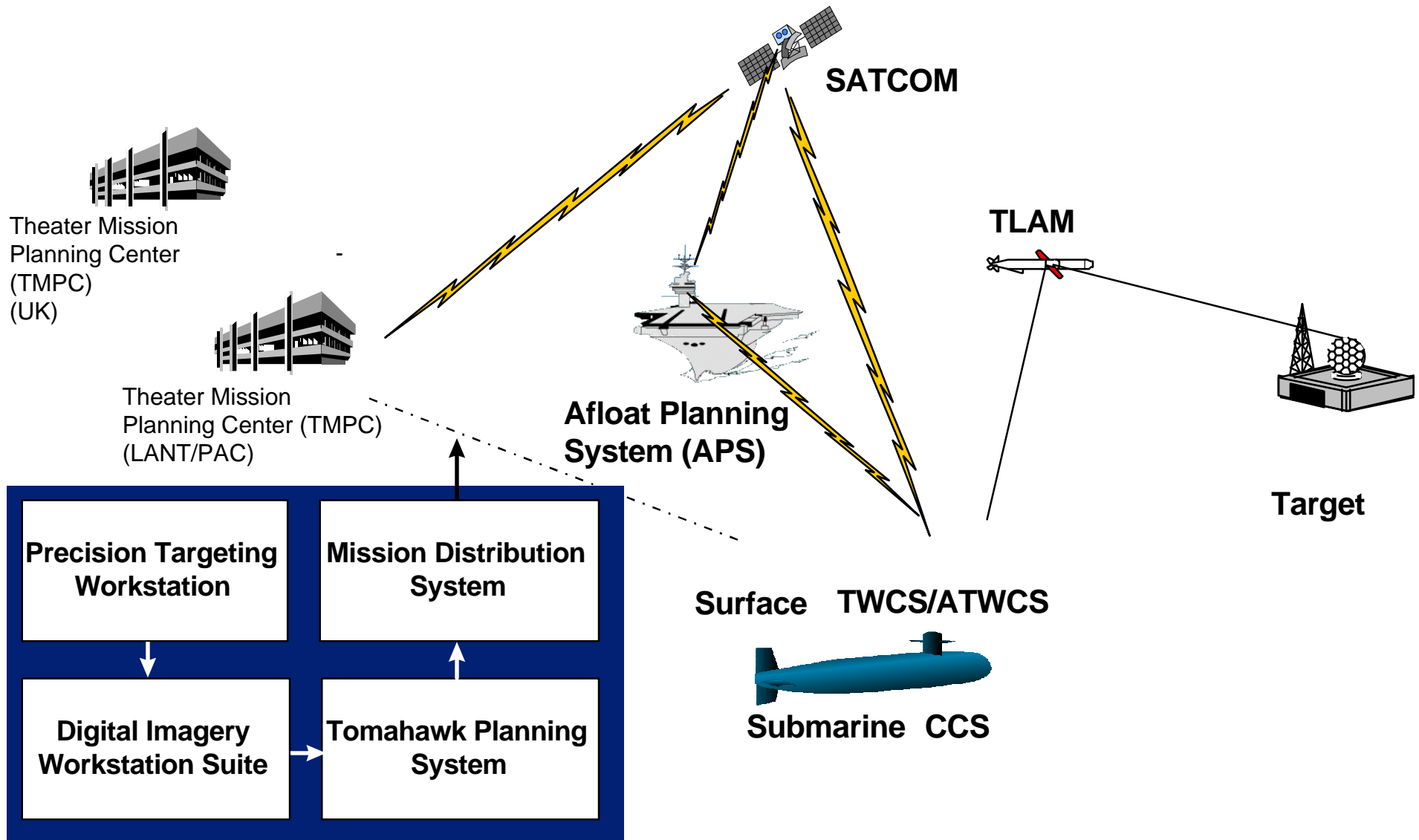


RADM John V. Chenevey
PEO(CU)

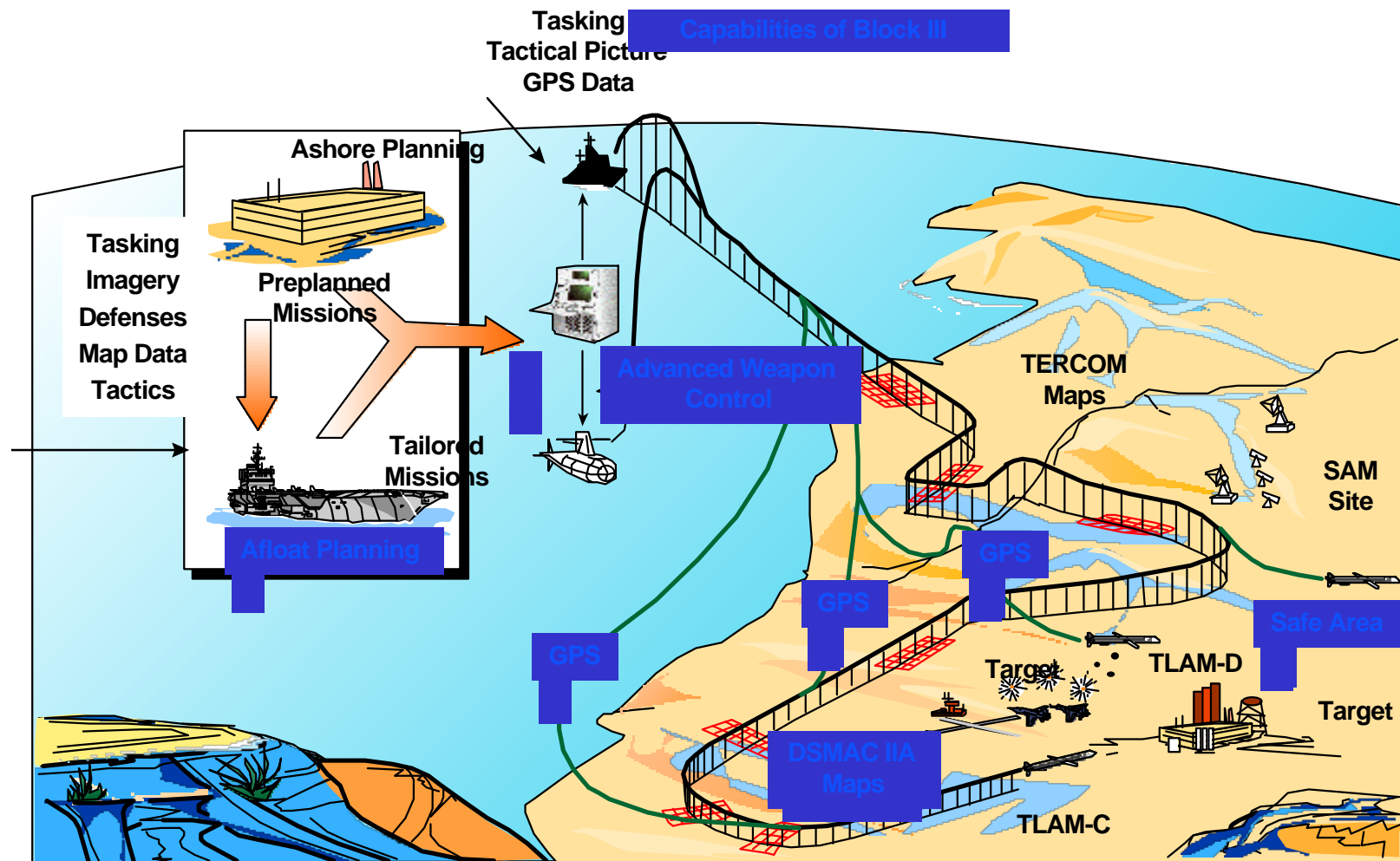
PEO(CU) Products



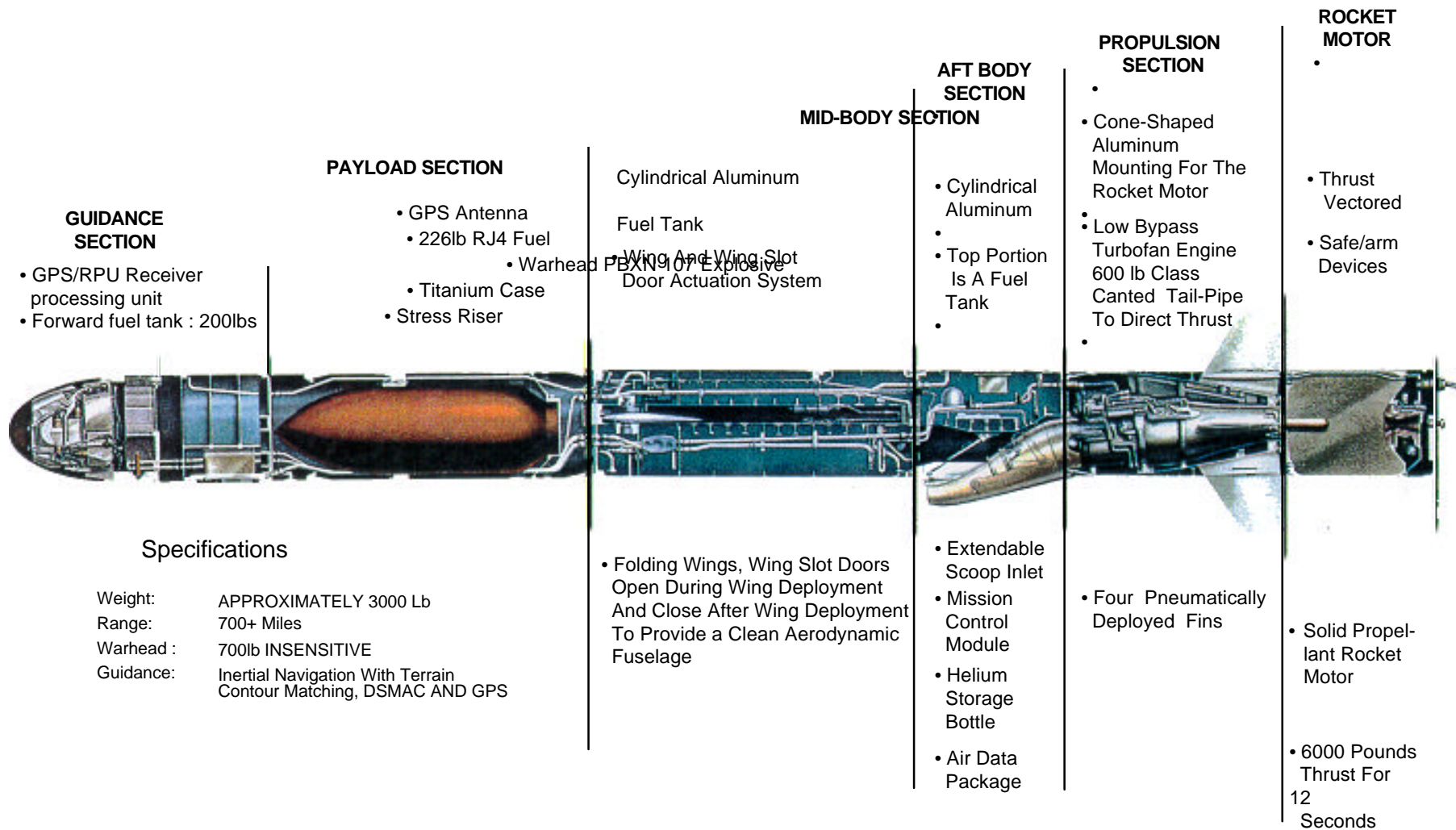
Tomahawk Weapon System



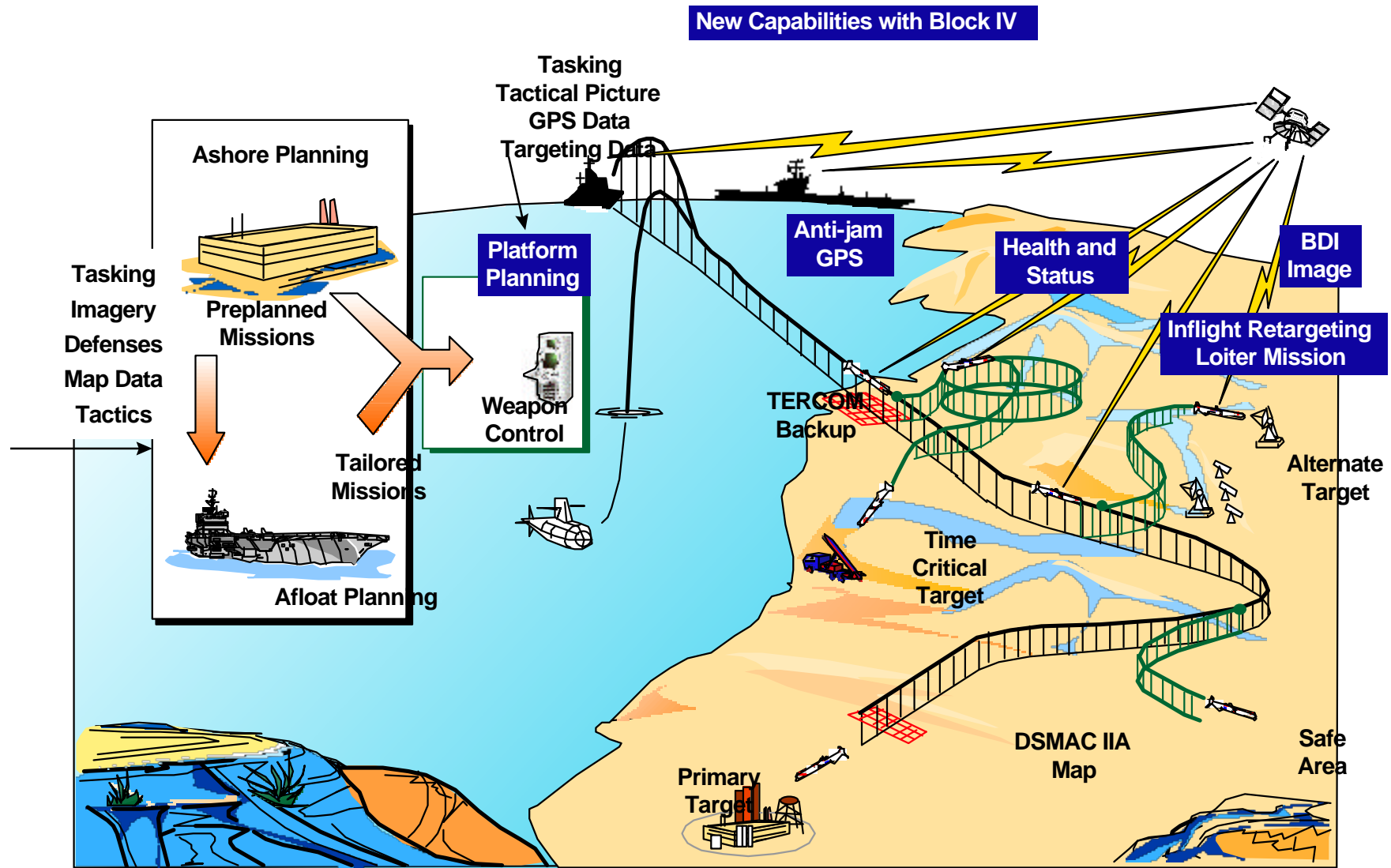
Today's Tomahawk



Tomahawk Block III

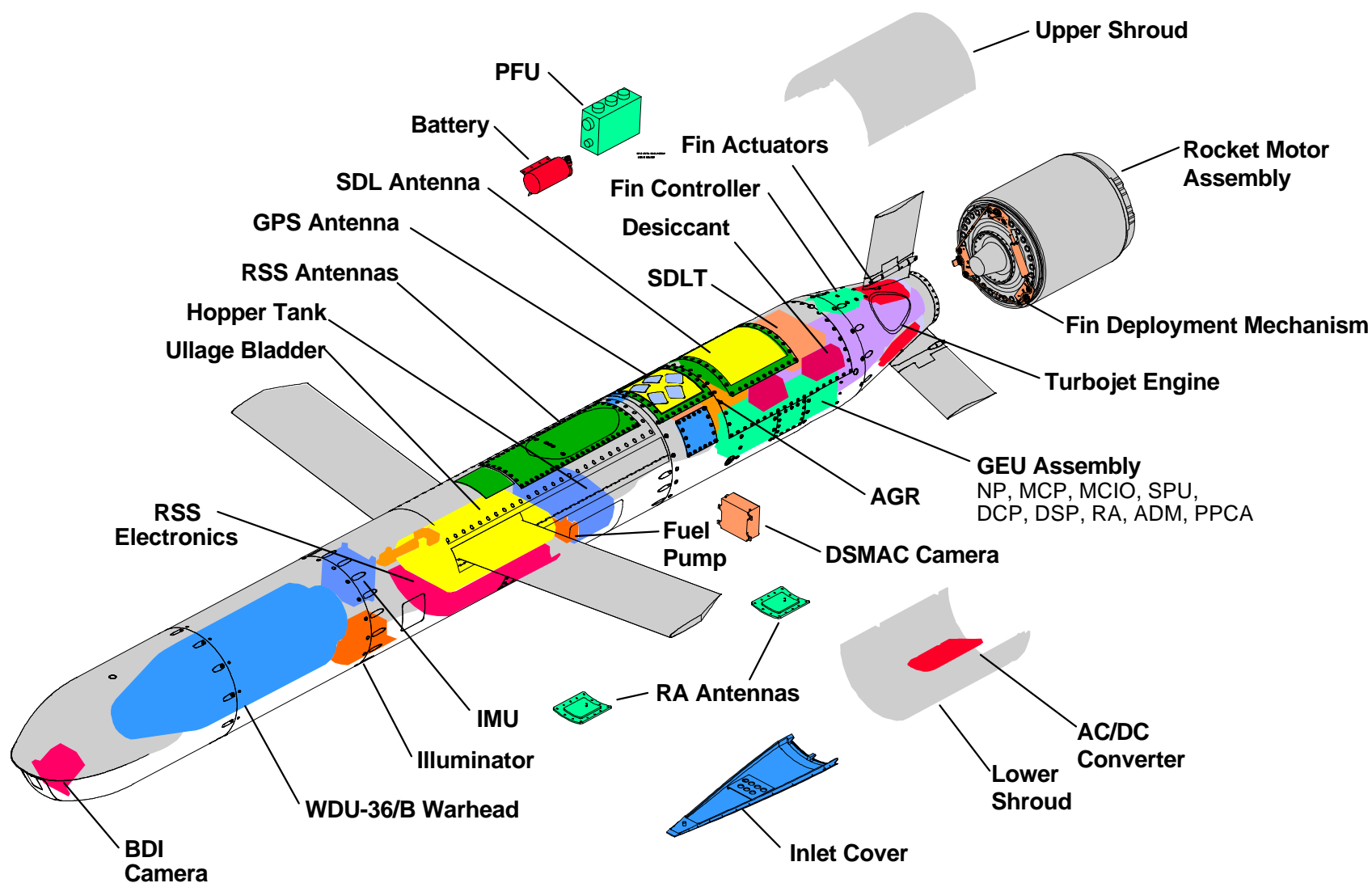


Tactical Tomahawk



Tactical Tomahawk

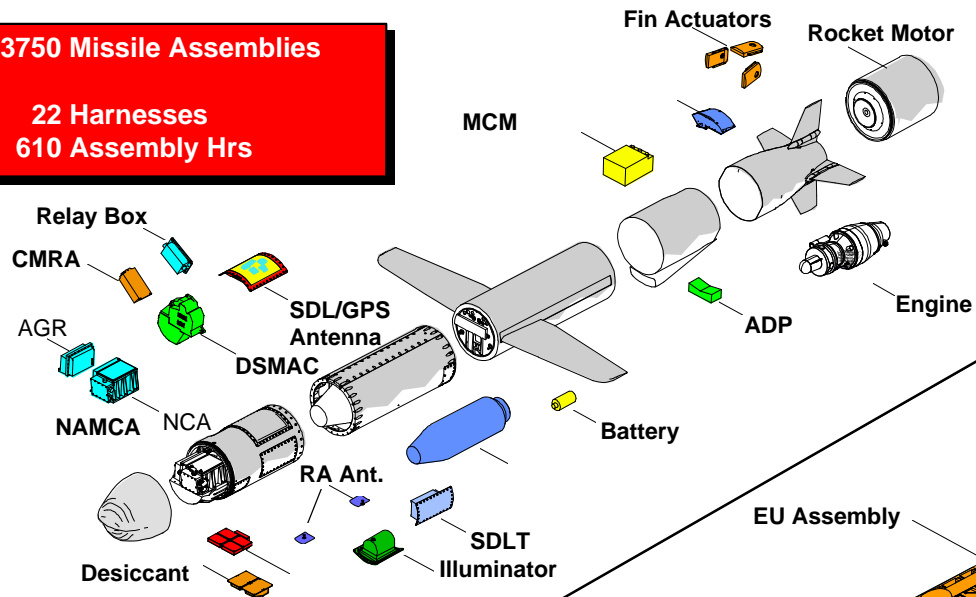
General Arrangement



Tactical Tomahawk Simplifies The Block IV Design and Assembly

3750 Missile Assemblies

**22 Harnesses
610 Assembly Hrs**

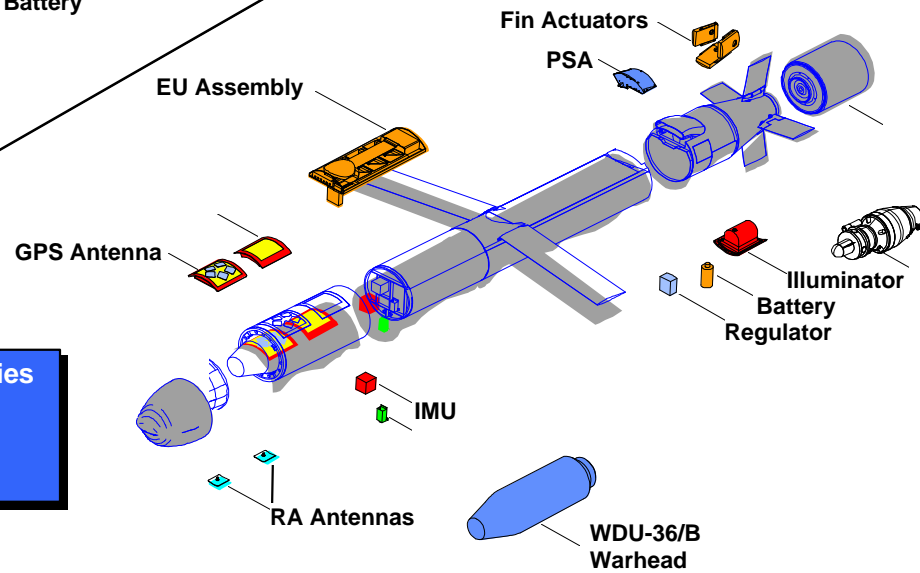


Tomahawk Block IV

**DSMAC IIA
Nav / Mission
Cmptr / Rad Alt**

Tactical Tomahawk

**1000 Missile Assemblies
800 Fasteners
10 Harnesses**



Tactical Tomahawk

-
-
- MILESTONE II DECISION 18 DEC 97
-
- EMD CONTRACT AWARD TO RAYTHEON 3 JUN 98
-
- PRELIMINARY DESIGN REVIEW HELD 22-25 FEB 99
-
- CRITICAL DESIGN REVIEW SCHEDULED FOR DEC 99
-
- INITIAL OPERATIONAL CAPABILITY APR 2003

NEW CAPABILITIES

MISSILE

- LAND ATTACK
 - CONVENTIONAL
 - GROWTH TO SUB MUNITIONS
- BATTLE DAMAGE INDICATION/ ASSESSMENT
 - 2 WAY SATELLITE DATA LINK
- ENROUTE FLEX / INFLIGHT RETARGETING
 - AJ-GPS
- AVERAGE UNIT COST
 - \$569K NEW (FY99\$ MULTI-YEAR)

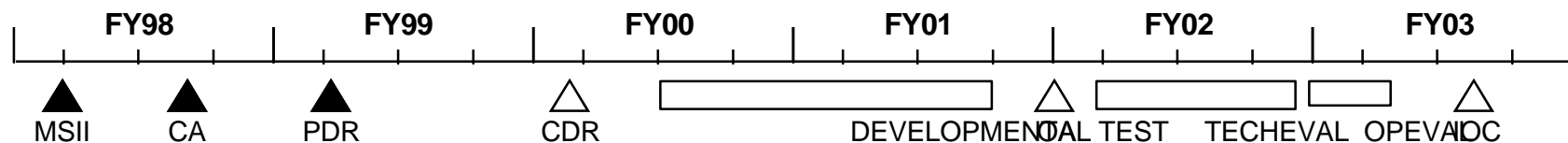
COMMAND AND CONTROL

- STRIKE COORDINATION
- LAUNCH PLATFORM MISSION PLANNING

WEAPON CONTROL SYSTEM

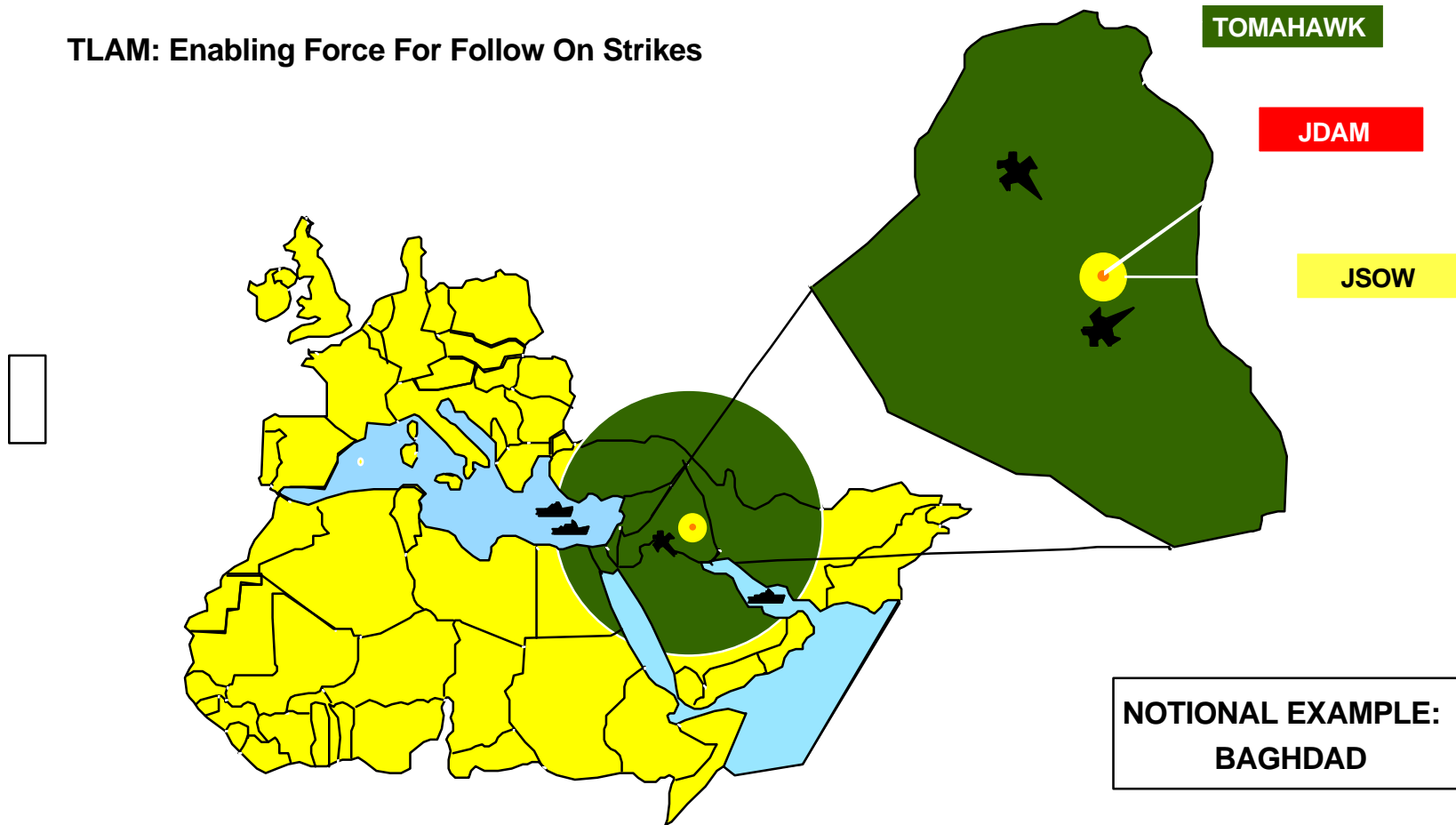
- TACTICAL TOMAHAWK WEAPON CONTROL SYSTEM

SYSTEM SCHEDULE

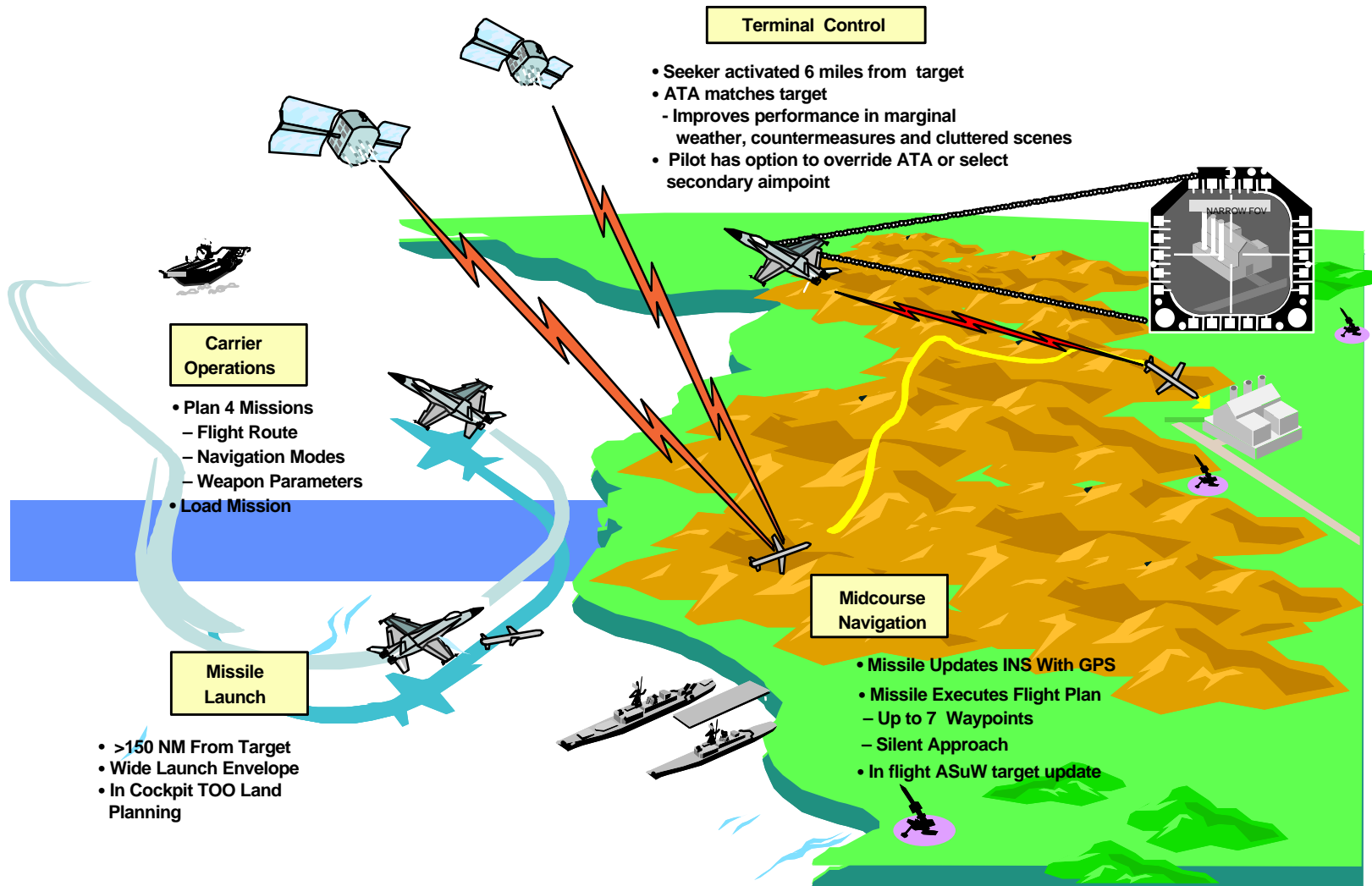


Tomahawk Stand-off Capability Complements TACAIR & Joint Weapons

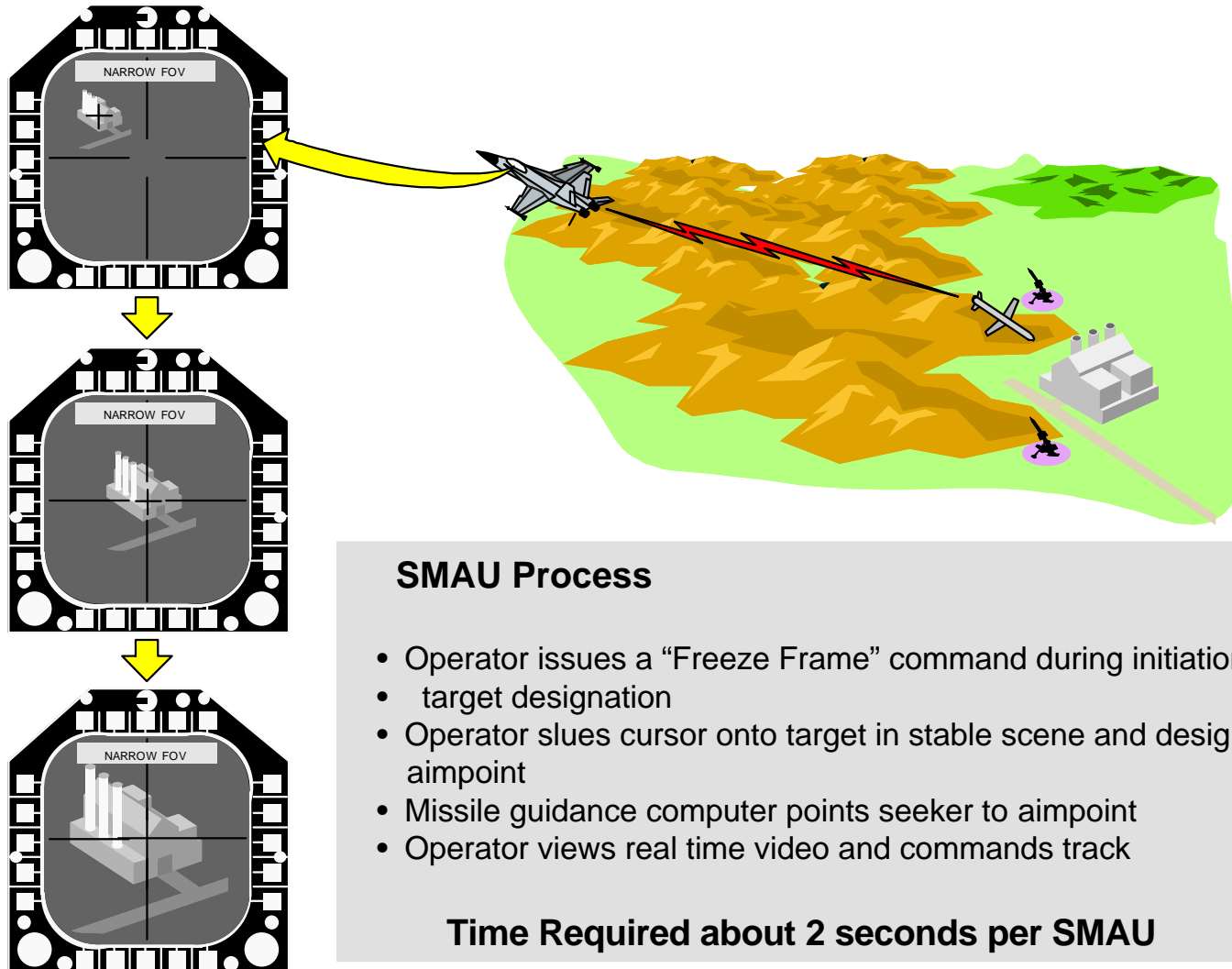
TLAM: Enabling Force For Follow On Strikes



SLAM-ER+ Concept of Operations



Stop Motion Aimpoint Update (SMAU) Decreases Pilot Workload



Automatic Target Acquisition (ATA)



JUSTIFICATION

- 50% of scene correlation buys 95% target acquisition confidence
 - Cluttered scenes
 - Poor weather
 - IR Counter Measures

CONCEPT

Parallel Development to SLAM ER Baseline

Compatible with Existing EO & IR Seekers

Adds about 5 min to Mission Planning

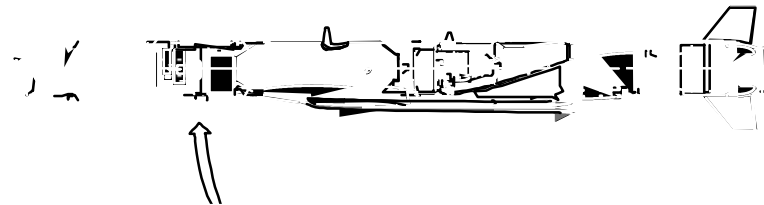
Direct Photo Match

- Single Photo
 - No Scene/Thermal Modeling
 - Photo Independent of Season
 - Photo Tolerant of Missile Approach Path
- Direct Use of Sensor Image
 - Uses All Information Available in the Image

Applicable to Maverick, Walleye, JSOW

- Independent of Seeker Tracking Algorithms

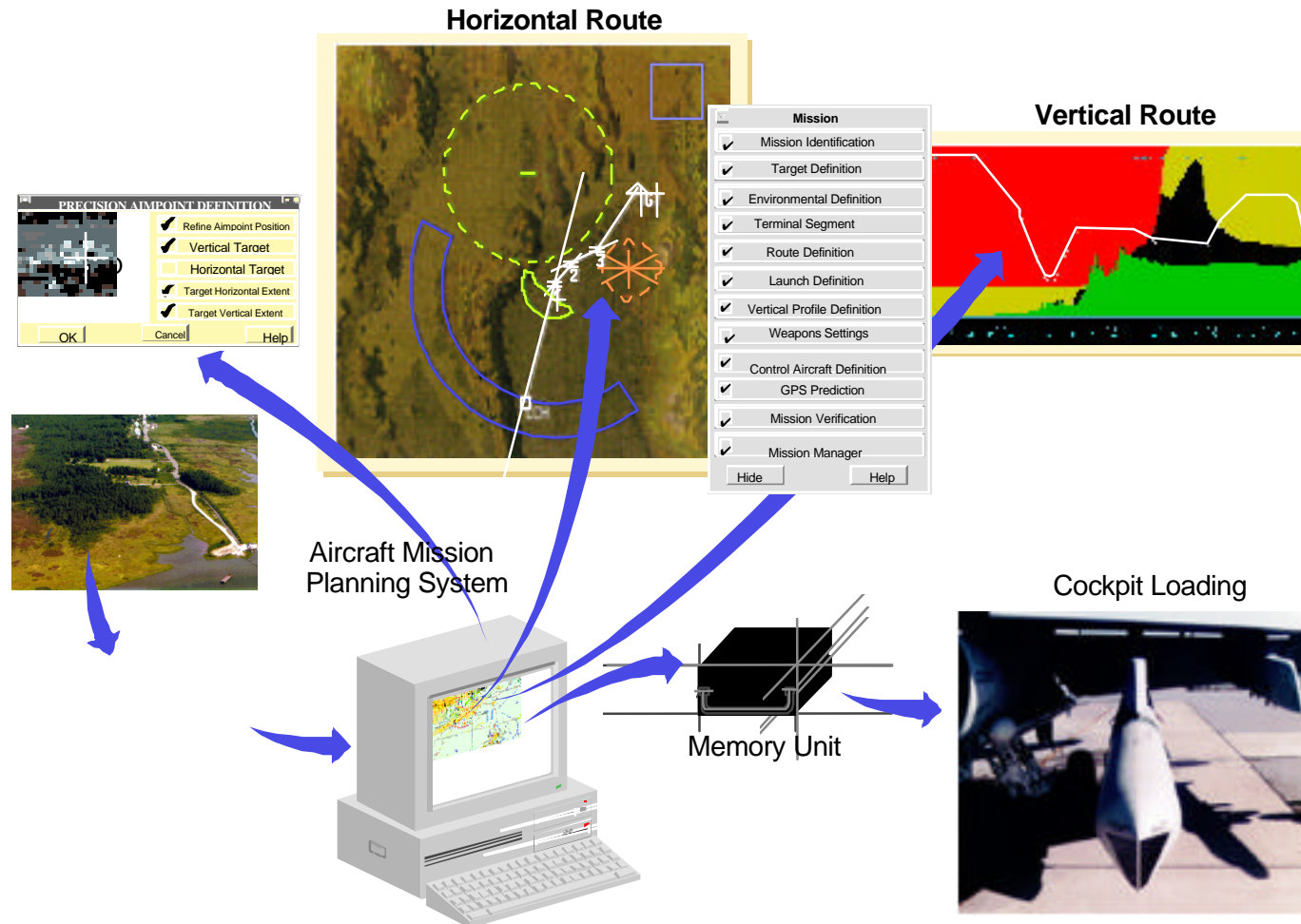
CONFIGURATION



Modifications to Incorporate ATA:

- Remove Existing AC-DC Power Converter Module
- Install ATA Module
- Install Repackaged AC-DC Power Converter Module
- Modify Wire Harness
- Load Modified Flight Program

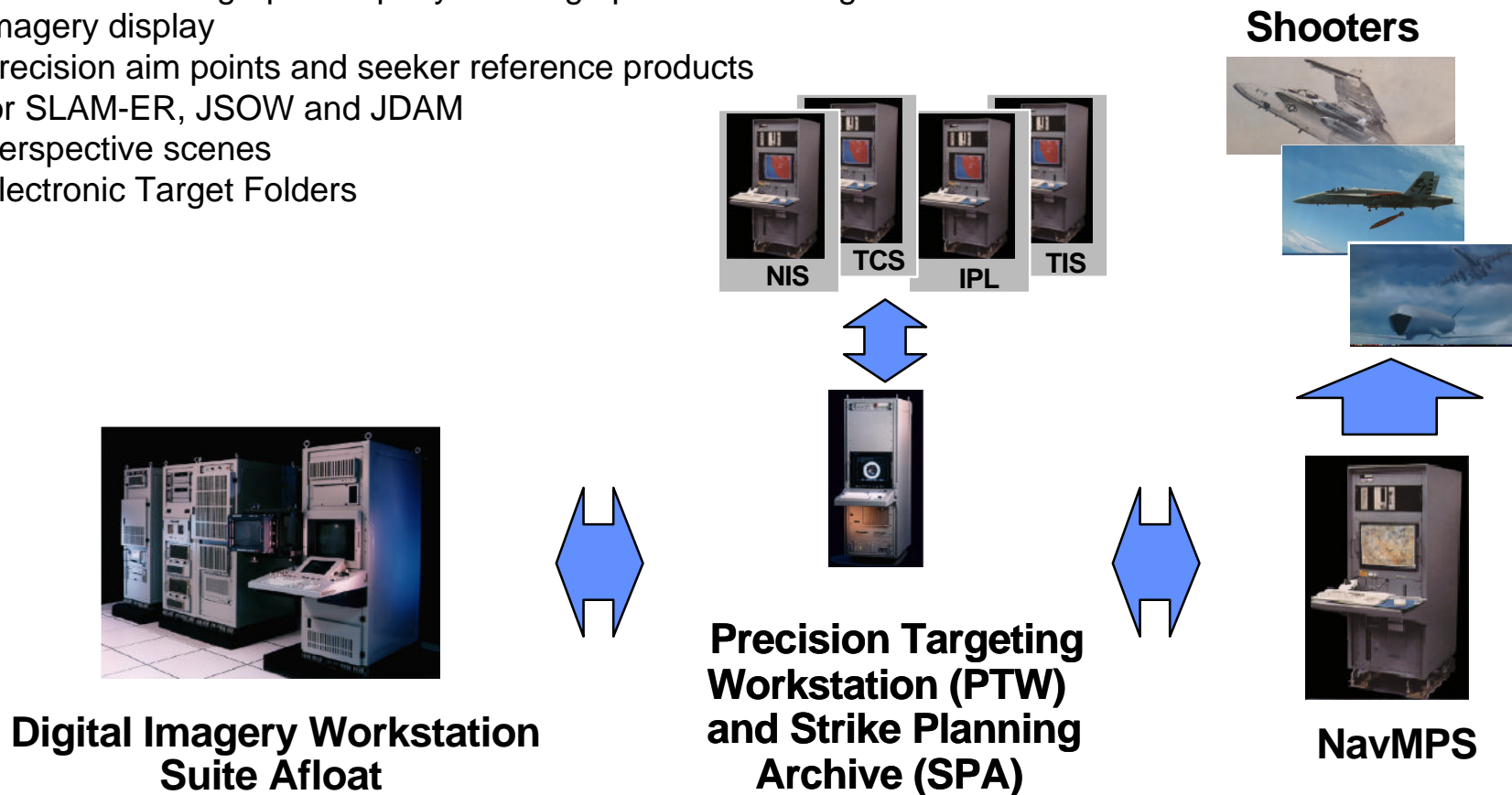
SLAM-ER Mission Planning



Mission Planning Requires Less Than 30 Minutes

Joint Services Imagery Processing System - Navy JSIPS-N TACAIR Strike Support

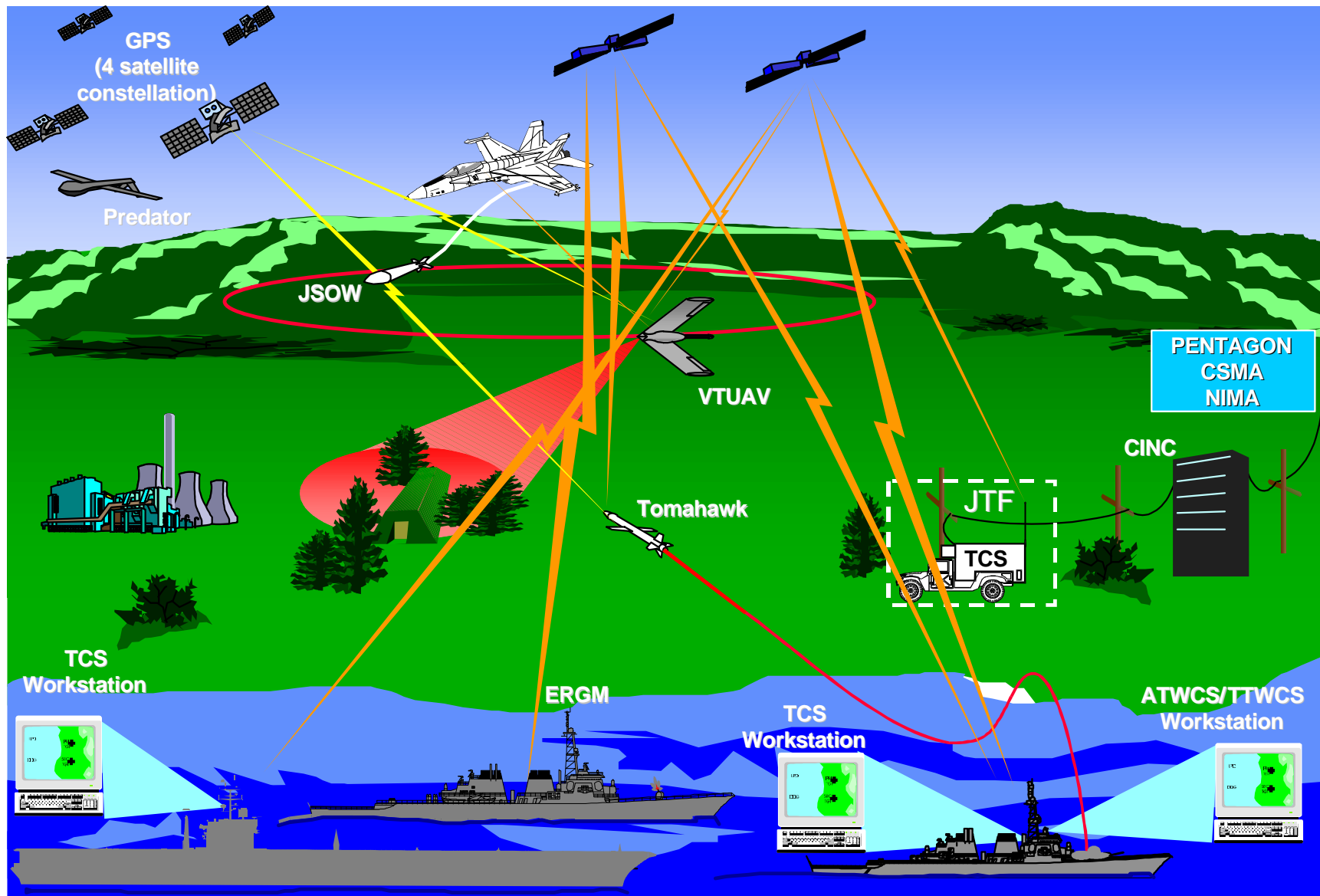
- Provides NavMPS TACAIR Mission Planner with access to the most current imagery and image derived products via the Strike LAN
 - Primary interface for imagery products and requests to other systems
 - Automated and graphical query for image product coverage
 - Imagery display
 - Precision aim points and seeker reference products for SLAM-ER, JSOW and JDAM
 - Perspective scenes
 - Electronic Target Folders



Perspective Scene Generated on JSIPS-N Provided to NavMPS



UAV Concept of Operations



Precision Targeting Summary

- Precision Targeting based on demonstrated performance of the operationally proven Tomahawk Weapon System
- Leveraging a highly accurate but time consuming process into one that is highly accurate and very responsive

-



- Providing targeting and imagery support for TACAIR precision weapons by direct connection via NavMPS
- Networking the wide variety of responsive imagery sources

Questions?

